

Raymarine®

DIGITAL RADAR

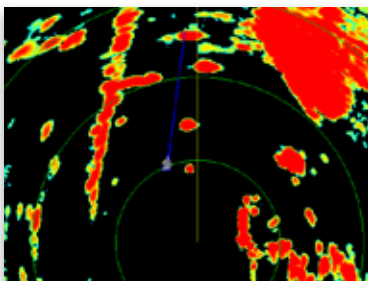


HD DIGITAL™ RADAR



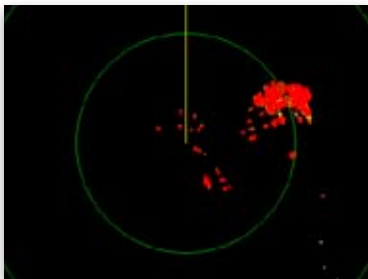
SEE THE HD DIGITAL DIFFERENCE

NEW HIGH SPEED SCANNING MODE



Raymarine's HD Digital scanners now feature automatic high speed scanning mode. Increasing the scanner speed from 24 to 48 rpm's provides superior tracking of high speed craft at short ranges.

NEW ANGLER'S ADVANTAGE: BIRD MODE

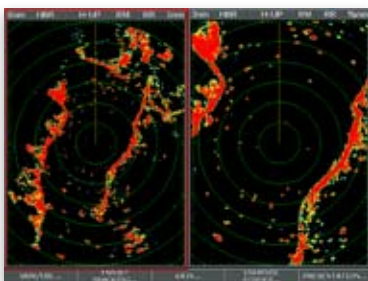


Find fish with your radar using Raymarine's HD Digital Bird mode. Detect and monitor the location of sea birds above schools of fish.

Already own a Raymarine HD or Super HD Digital Open Array? Bird mode and High Speed Scanning are coming Spring 2010 via software update. Check out www.raymarine.com for details.



NEAR AND FAR: DUAL RANGE MODE

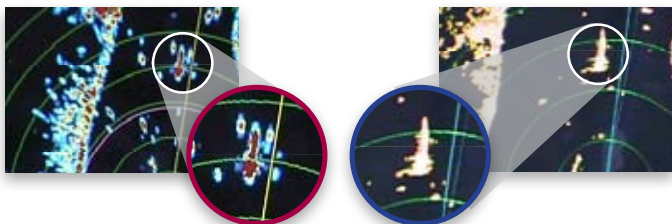


Raymarine HD Digital radars feature dual range mode enabling you to monitor both a short and long range radar image simultaneously, from a single scanner.

SUPER HD DIGITAL VS 25KW RADAR COMPARISON

Raymarine 4kW 4' Super HD
Digital Radar

25kW 8.5' commercial radar



Target separation on longer range scales (6 NM) is greatly improved. Raymarine Super HD Digital processing detects and separates targets undetected by the larger commercial-grade radar.

DIGITAL RADOMES



DIGITAL RADOMES

The RD418D and RD424D digital radar scanners set the benchmark for compact radar antenna performance. Each radome uses Raymarine's exclusive low-noise receiver technology for superior weak target detection. A class leading 8 pulse width/PRF transmitter ensures optimum performance through every range scale and Auto GST™ technology provides intelligent control of gain, sea clutter and tune adjustments automatically. Choose the powerful yet space saving RD418D radome with 4 kilowatts of output power and a narrow 4.9° horizontal beam width for enhanced target resolution. The larger 4 kW RD424D offers superior resolution with a 3.9° degree beam width. These highly advanced digital radomes are easy to install, thanks to a small diameter inter-unit cable for both power and SeaTalk^{hs} networking.

DIGITAL RADOME FEATURES:

- Unmatched radome performance using a combination of digital and analog signal processing
- Narrow horizontal beam widths for superior target detection and resolution
- High power 4kW transmitters for penetrating rain and fog
- 48nm maximum range scale
- SeaTalk^{hs} networking - plug and play with C-Series Widescreen, E-Series and G-Series multifunction displays and networks
- 8 pulse-width/PRF transmitter provide optimum performance at all ranges
- Auto GST™ provides enhanced small target returns and eliminates clutter automatically
- Simplified installation using a thin interconnect cable for power and data



HD DIGITAL™ RADOMES



NEW HD DIGITAL RADOMES

Raymarine's new HD Digital radome scanners combine the power and clarity of HD Digital signal processing with an ultra-compact scanner suitable for all types of vessels. Compatible with C-Series Widescreen, E-Series Widescreen and G-Series Multifunction displays these radomes offer a 256-color radar display and the clearest, most lifelike radar presentation available from any radome scanner. The RD418HD and RD424HD feature the same adaptive digital receiver technology found in our open array antennas. By adjusting automatically to changing environmental and sea conditions, the HD Digital radomes provide crisp, accurate contact echoes at short ranges, as well as outstanding long range performance up to 48 nautical miles. Rain, fog and high seas are no match for the HD Digital radome. Using its powerful processor the HD Digital radome intelligently separates true contacts from noise and clutter. The RD418HD and RD424 HD offer small boat captains all of the same capabilities usually reserved for larger capacity boats.

HD DIGITAL RADOME FEATURES:

- Adaptive digital receiver automatically adjusts to changing environmental and sea conditions for a dramatically clearer picture
- New high speed (48rpm) target tracking
- Fast digital receiver processor
- 256 color multi-level display with selectable color palettes
- New Bird Mode automatically optimizes the receiver for detecting sea birds above schools of fish
- Automatic harbor, coastal, offshore and buoy operating modes
- Dual-range mode allows you to monitor both long and short ranges simultaneously with a single scanner and display

HD DIGITAL™ RADAR



HD DIGITAL™ RADAR

Raymarine's HD Digital technology brings radar users the power of digital signal processing with a truly adaptive transmitter and receiver that automatically adjusts to changing environmental and sea conditions. HD Digital radar delivers a dramatically clearer radar picture with crisp, well-defined contact echoes and a life-like target presentation. HD Digital radar's high-speed digital processing detects weak and distant contacts automatically, while virtually eliminating clutter and noise.

HD DIGITAL FEATURES:

- Adaptive digital receiver automatically adjusts to changing environmental and sea conditions for a dramatically clearer picture
- New high speed (48rpm) target tracking*
- Fast digital receiver processor
- 256 color multi-level display with selectable color palettes
- New Bird Mode automatically optimizes the receiver for detecting sea birds*
- Automatic harbor, coastal, offshore and buoy operating modes
- Dual-range mode allows you to monitor both long and short ranges simultaneously with a single scanner and display
- Thin interconnect cable and remotely mounted voltage converter module



Dual Range Mode

* Available in Spring 2010

SUPER HD DIGITAL™ RADAR



SUPER HD DIGITAL™ RADAR

More than just an evolution in radar technology, Super HD Digital radar is a quantum leap into the future of marine radar. Using highly advanced digital signal processing, Super HD Digital radars surpass conventional radar systems with incredibly detailed target resolution and fully automatic operation.

Super HD Digital radar has much greater dynamic range than conventional radar. This dramatic increase in dynamic range enables the digital receiver to acquire and process vast amounts of echo information that is normally lost by conventional analog radar systems. Super HD Digital technology then uses a powerful processor to intelligently isolate and identify true radar targets, while simultaneously eliminating unwanted sea clutter. The result is a dramatically clearer radar display.

SUPER HD DIGITAL FEATURES

All the features of HD Digital Radar plus:

- Superior performance compared to conventional radar systems of the same power and size
- Super HD signal processing reduces the effective antenna beam width, enabling increased resolution and performance

SPECIFICATIONS AND ORDERING INFO

SUPER HD DIGITAL OPEN ARRAY SPECIFICATIONS

| 4kW, 48" Super HD Digital Open Array 12kw, 48" Super HD Digital Open Array 4kW, 72" Super HD Digital Open Array 12kW, 72" Super HD Digital Open Array | | |
|--|--|--|
| POWER | | |
| Nominal Voltage (volts DC) | 12v, and 24v, systems | 12v and 24v systems |
| Absolute voltage range | 10.8-32v DC | 10.8-32v DC |
| ENVIRONMENTAL | | |
| Temperature range | -10°C to +55°C Operating -20°C to +70°C Non-operating | -10°C to +55°C Operating -20°C to +70°C Non-operating |
| Humidity | Up to 95% | Up to 95% |
| Waterproofing standard | IPX6 | IPX6 |
| Product Weight lbs(kg) | 48": 56.4 lbs (25.6 kg) 72": 63.9 lbs (29 kg) | 48": 56.4 lbs (25.6 kg) 72": 63.9 lbs (29 kg) |
| SCANNER FEATURES | | |
| Receiver Type | Super HD Digital | Super HD Digital |
| Maximum range scale | 72nm | 72nm |
| Transmitter frequency | 9420 +/- 20 MHz | 9420 +/- 20 MHz |
| Peak power output | 4kW | 12kW |
| Pulse length/PRF | 8 (auto target/expand) | 8 (auto target/expand) |
| Horizontal beam width -3 dB | Adjustable to < 1° | Adjustable to < 1° |
| Vertical beam width -3dB | 25° | 25° |
| Rotation rate | 24/48 rpm | 24/48 rpm |

HD DIGITAL OPEN ARRAY SPECIFICATIONS

| 4kW, 48" HD Digital Open Array 12kw, 48" HD Digital Open Array 4kW, 72" HD Digital Open Array 12kW, 72" HD Digital Open Array | | |
|--|--|--|
| POWER | | |
| Nominal Voltage (volts DC) | 12v, and 24v systems | 12v, and 24v systems |
| Absolute voltage range | 10.7-32v DC | 10.7-32v DC |
| ENVIRONMENTAL | | |
| Temperature range | -10°C to +55°C Operating -20°C to +70°C Non-operating | -10°C to +55°C Operating -20°C to +70°C Non-operating |
| Humidity | Up to 95% | Up to 95% |
| Waterproofing standard | IPX6 | IPX6 |
| Product Weight lbs(kg) | 48": 56.4 lbs (25.6 kg) | 72": 63.9 lbs (29 kg) |
| SCANNER FEATURES | | |
| Receiver Type | HD Digital | HD Digital |
| Maximum range scale | 72nm | 72nm |
| Transmitter frequency | 9405 +/- 20 MHz | 9405 +/- 20 MHz |
| Peak power output | 4kW | 12kW |
| Pulse length/PRF | 8 (auto target/expand) | 8 (auto target/expand) |
| Horizontal beam width -3 dB | 1.9° | 1.15° |
| Vertical beam width -3dB | 25° | 25° |
| Rotation rate | 24/48 rpm | 24/48 rpm |

SPECIFICATIONS AND ORDERING INFO

SUPER HD DIGITAL ORDERING INFORMATION

| PART # | DESCRIPTION |
|--------|--|
| T52085 | RA1048SHD 4kW 48" Super HD Digital Open Array with 15m cable |
| T52087 | RA1072SHD 4kW 72" Super HD Digital Open Array with 15m cable |
| T52086 | RA3048SHD 12kW, 48" Super HD Digital Open Array with 15m cable |
| T52088 | RA3072SHD 12kW, 72" Super HD Digital Open Array with 15m cable |

HD DIGITAL ORDERING INFORMATION

| PART # | DESCRIPTION |
|--------|--|
| T52071 | RA1048HD 4kW 48" HD Digital Open Array with 15m cable |
| T52074 | RA1072HD 4kW, 72" HD Digital Open Array with 15m cable |
| T92168 | RA3048HD 4kW 48" HD Digital Open Array with 15m cable |
| T92169 | RA3072HD 4kW, 72" HD Digital Open Array with 15m cable |

DIGITAL RADOME SPECIFICATIONS

| | RD418D Radome | RD424D Radome |
|-------------------------------------|--|--|
| POWER | | |
| Nominal Voltage (volts DC) | 12v, 24v systems | 12v, 24v systems |
| Absolute voltage range | 10.8-32v DC | 10.8-32V DC |
| Power consumption (typical/standby) | 40W transmit, 20W standby | 40W transmit, 20W standby |
| ENVIRONMENTAL | | |
| Temperature range | -10°C to +55°C Operating -20°C to +70°C Non-Operating | -10°C to +55°C Operating -20°C to +70°C Non-Operating |
| Humidity | Up to 95% | Up to 95% |
| Waterproofing standard | IPX6 | IPX6 |
| Product Weight lbs (kg) | 21 (9.5) | 22 (10) |
| SCANNER FEATURES | | |
| Maximum range scale | 48nm | 48nm |
| Transmitter frequency | 9405 +/- 25 MHz | 9405 +/- 25 MHz |
| Peak power output | 4 kW | 4 kW |
| Pulse length/PRF | 8 (auto target/expand) | 8 (auto target/expand) |
| Horizontal beam width -3dB | 4.9° | 3.9° |
| Vertical beam width -3dB | 25° | 25° |
| Rotation Rate | 24 rpm | 24 rpm |
| Signal Processing | Digital/Analog | Digital/Analog |

DIGITAL RADOME ORDERING INFORMATION

| PART # | DESCRIPTION |
|--------|--------------------------------|
| E92130 | RD418D 4kW digital radome only |
| E92132 | RD424D 4kW digital radome only |

SPECIFICATIONS AND ORDERING INFO

HD DIGITAL RADOME SPECIFICATIONS

| | RD418HD Digital Radome | RD424HD Digital Radome |
|-------------------------------------|--|--|
| POWER | | |
| Nominal Voltage (volts DC) | 12v, 24v systems | 12v, 24v systems |
| Absolute voltage range | 10.8-32v DC | 10.8-32V DC |
| Power consumption (typical/standby) | 40W transmit, 20W standby | 40W transmit, 20W standby |
| ENVIRONMENTAL | | |
| Temperature range | -10°C to +55°C Operating -20°C to +70°C Non-Operating | -10°C to +55°C Operating -20°C to +70°C Non-Operating |
| Humidity | Up to 95% | Up to 95% |
| Waterproofing standard | IPX6 | IPX6 |
| Product Weight lbs (kg) | 21 (9.5) | 22 (10) |
| SCANNER FEATURES | | |
| Maximum range scale | 48nm | 48nm |
| Transmitter frequency | 9405 +/- 25 MHz | 9405 +/- 25 MHz |
| Peak power output | 4 kW | 4 kW |
| Pulse length/PRF | 8 (auto target/expand) | 8 (auto target/expand) |
| Horizontal beam width -3dB | 4.9° | 3.9° |
| Vertical beam width -3dB | 25° | 25° |
| Rotation Rate | 24/48 rpm | 24/48 rpm |
| Signal Processing | HD Digital | HD Digital |

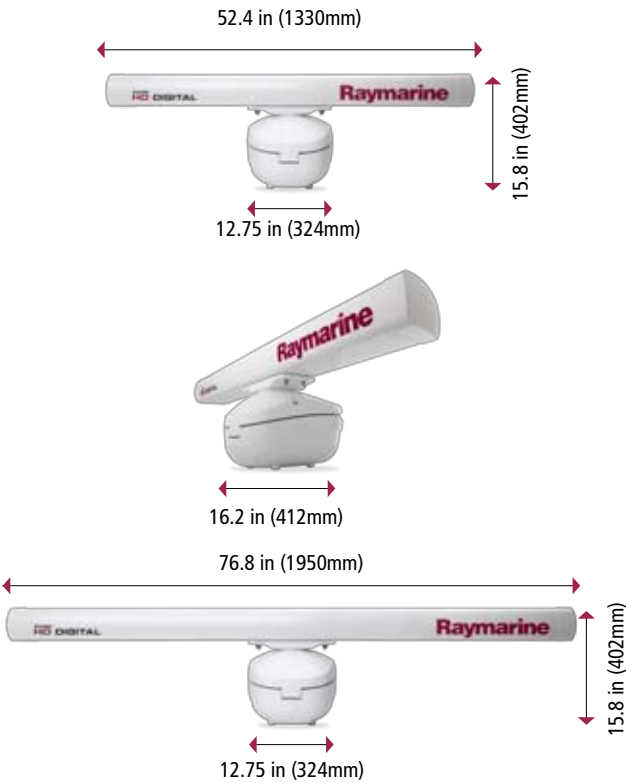
HD DIGITAL RADOME ORDERING INFORMATION

| PART # | DESCRIPTION |
|--------|---------------------------------|
| E92130 | RD418HD 4kW digital radome only |
| E92132 | RD424HD 4kW digital radome only |

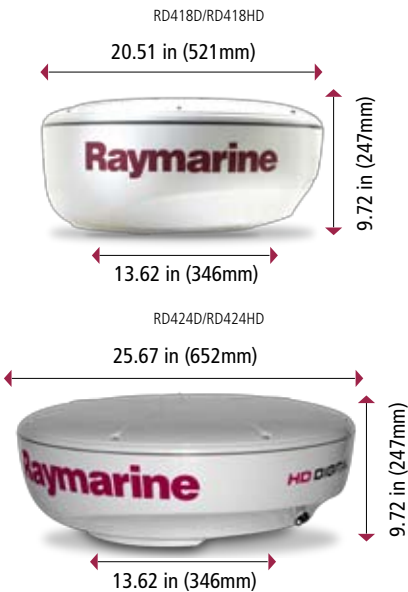


DIMENSIONS

OPEN ARRAY DIMENSIONS



DIGITAL & HD DIGITAL RADOME DIMENSIONS



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